

25-8410-010

Rob Aulski

1L-0389-16

NPDES Permit No. IL0002640

Illinois Environmental Protection Agency

Division of Water Pollution Control

2200 Churchill Road

Springfield, Illinois 62706

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Reissued (NPDES) Permit

Expiration Date: January 1, 1984

Issue Date: June 11, 1981

Effective Date: July 11, 1981

Name and Address of Permittee:

AVS Chemicals, Inc
Allied Chemical Corporation
12260 Carondelet Avenue
Chicago, Illinois 60633

Facility Name and Address:

Allied Chemical Corporation
Calumet Works
12260 Carondelet Avenue
Chicago, Illinois 60633
Cook County

Discharge Number and Name:

#001 non-contact cooling water
#002 non-contact cooling water

Receiving Waters:

Calumet River
Calumet River

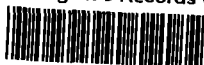
In compliance with the provisions of the Illinois Environmental Protection Act, the Chapter 3 Rules and Regulations of the Illinois Pollution Control Board, and the FIFCA, the above-named permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the standard conditions and attachments herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Thomas G. McSwiggin, P.E.
Manager, Permit Section
Division of Water Pollution Control

TGM:MAS:3W/5456b/sp

EPA Region 5 Records Ctr.



288546

NPDES Permit No. IL0002640

Effluent Limitations and Monitoring

PARAMETER	LOAD LIMITS lbs/day		CONCENTRATION LIMITS mg/l		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVG.	DAILY MAX.	30 DAY AVG.	DAILY MAX.		

1. From the effective date of this permit until January 1, 1984, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Cutfall(s): 001, 002

Flow					Measure when monitoring	
pH	See Special Condition #1				3/Week	grab
temperature	See Special Condition #6				Weekly single reading	

6-9

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Special Conditions

sect 304.125

1. The pH shall be in the range 5.0 to 10.0. If Rule 413 contained in R76-21 is promulgated without substantial differences, the applicable effluent limitation for pH shall be 6.0 to 9.0. All other limitations shall remain as indicated in this Permit.
2. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.
3. For the purpose of this permit, this discharge is limited to non-contact cooling, free from process and other wastewater discharges. In the event that the permittee shall require the use of water treatment additives, the permittee must request a change in this permit in accordance with the Standard Conditions -- Attachment H.
4. The permittee shall record monitoring results on Discharge Monitoring Report Forms using one such form for each discharge each month.

Discharge Monitoring Reports shall be mailed to the IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
2200 Churchill Road
Springfield, Illinois 62705

Attention: Compliance Assurance Section

5. The completed Discharge Monitoring Report forms shall be retained by the permittee for a period of six months and then shall be mailed and received by the IEPA in accordance with the following schedule, unless otherwise specified by the permitting authority.

Period	Received by IEPA
January, February, March, April, May, June	July 15
July, August, September, October, November, December	January 15

6. Discharge of wastewater from this facility must not alone or in combination with other sources cause the receiving stream to violate the following thermal limitations at the edge of the mixing zone which is defined by Rule 201(a), Illinois Pollution Control Board Rules and Regulations, Chapter 3: Water Pollution, as amended:
 - A. Maximum temperature rise above natural temperature must not exceed 50F (2.78°C).

Special Conditions

- B. Water temperature at representative locations in the main river shall not exceed the maximum limits in the following table during more than one (1) percent of the hours in the 12-month period ending with any month. Moreover, at no time shall the water temperature at such locations exceed the maximum limits in the following table by more than 30°F (1.67°C). (Main river temperatures are temperatures of those portions of the river essentially similar to and following the same thermal regime as the temperatures of the main flow of the river.)

	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
°F	60	60	60	90	90	90	90	90	90	90	90	60
°C	15.6	15.6	15.6	32.2	32.2	32.2	32.2	32.2	32.2	32.2	32.2	15.6

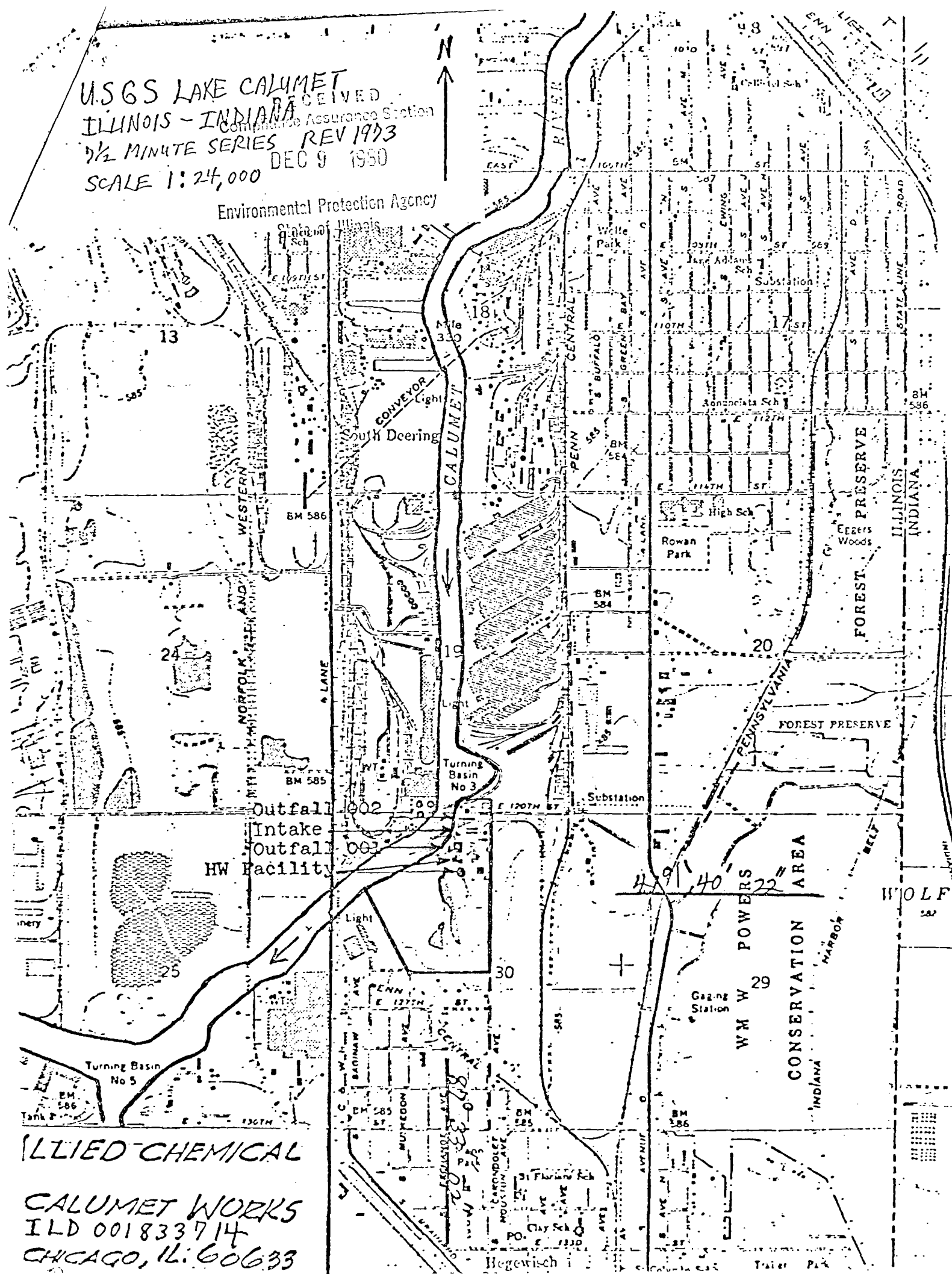
7. The permittee shall by July 1, 1982 develop a Best Management Practices (BMP) program to limit and control plant site runoff, spillage or leaks, sludge or waste disposal, and drainage from raw material storage which are associated with or ancillary to industrial manufacturing or waste treatment processes. In developing a BMP, the permittee shall evaluate his processes and consider for any toxic or hazardous pollutants listed under Section 307(a)(1) or 311 of the Clean Water Act which may not be amenable to removal through waste treatment facilities or which may be contributed in significant amounts to any surface or groundwaters.

A report summarizing and outlining the BMP shall be submitted to this Agency and the USEPA, Region V by January 1, 1983.

The BMP shall be fully implemented by April 1, 1984 and a report submitted on or before July 1, 1984 to IEPA and USEPA, Region V, indicating the status of final compliance.

In the event that any USEPA regulations concerning the development and implementation of BMP's become effective, the permittee shall adhere to the requirements of those regulations. If compliance with those regulations requires additional developmental and implementation time, permittee shall request their permit be modified. IEPA, upon concurrence with permittee on any time extensions, may modify this permit without Public Notice, to reflect any BMP time extensions.

Environmental Protection Agency





Illinois Environmental Protection Agency

1701 S. 1st St.
Maywood, Ill. 60153

May 31, 1979

✓ Allied Chemical Corporation

Compliance Sampling Inspection
(IL0002640)

Mr. Christian T. Nielsen, Plant Manager
Allied Chemical Corporation
Calumet Works
12260 South Carondelet Avenue
Chicago, IL 60633

Dear Mr. Nielsen:

Pursuant to its responsibilities under the Illinois Environmental Protection Act, Engineer Frank C. Yumping, representing this Agency, conducted a Compliance Sampling Inspection at your industrial wastewater treatment facilities on April 11, 1979. The Calumet Works was represented by Dennis Hatfield, Supervisor of Environmental Engineering and Jim Harris, Technical Supervisor, who accompanied our representative during the inspection, and you. The purpose of this Compliance Sampling Inspection was to evaluate whether your wastewater treatment facility is in compliance with the terms and conditions of your National Pollutant Discharge Elimination System (NPDES) Permit #IL0002640. A copy of the completed compliance evaluation inspection form (EPA 3560-3), including the results of analyses on samples split with your facility, are enclosed for your reference.

A review of our records shows that you have been reporting pH excursions monthly since November, 1977 and almost monthly prior to that month as a result of acid leaks in your cascade type heat exchangers. Our representative reports that you have a program of replacing these cascade type exchangers with the tube and shell type heat exchangers which are less prone to leaks. We would appreciate being informed as to the current status of this program and when you expect full conversion to be completed.

We wish to take this opportunity to convey our appreciation to you and your environmental control staff for the courtesy and cooperation extended to our representative during the inspection.

If you have any questions regarding the content of the enclosed Compliance Sampling Inspection Form, please contact Engineer Frank Yumping at the above address or at 312/345-9780.

Very truly yours,

DIVISION OF WATER POLLUTION CONTROL

Edward L. Marek
Edward L. Marek, Manager Region II

Field Operations Section

FCY/mm

cc - DWPC/FOS/RU
- DWPC/CMU

P₃

SPECIAL ANALYSIS FORM

04182 APR 27

Time Collected 1:30 PM (FOR OIL ONLY)

Sub-Basin MAYWOOD

Date Collected 4-27-79

Collector F. J. YUMPING

Facility Name: US STEEL SOUTHWORKS

Facility Number:

File Town CHICAGO

Stream Name(s) DISCHARGE TO NORTH SLIP

Stream Code:

Source of Sample: (Exact Location)

MANHOLE IN ROADWAY : DISCH. FROM PLANT OUTFALL # P₃

24 HOUR COMPOSITES COLL. DURING LAST 24 HOURS

Physical Observations, Remarks: EXCEPT FOR OIL WHICH IS GRAB

RAINING

	Field Dissolved Oxygen	Field pH	Field Temp. 61° F
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0.000	Arsenic		Coliform/100ml		BOD
0.0	Barium		Fecal Coliform	8	COD
0.1	Boron		100 ml	206	TS/EC
0.00	Cadmium		Fecal Strep	19	Susp. Solids
			100 ml		
0.00	Copper	0.07	Algae (Total) /ml		Vol. Susp. Solids
			Anmonia (N)	8.5	pH (units)
0.00	Chromium (tri)		Organic Nitrogen (N)		Turbidity (JTU)
0.00	Chromium (hex)	0.3	Nitrate + Nitrite (N)		Hardness
0.4	Iron (Total)	0.05	Phosphorus (P)		Alkalinity
	Iron (Dissolved)	17	Chloride		Total Acidity
0.05	Lead	0.4	Fluoride		Free Acidity
0.04	Manganese	29	Sulfate		
0.0	Mercury (ppb)	0.00	Cyanide	2	Oil GRAB
0.0	Nickel		MBAS		Other (Specify)
0.00	Selenium	0.000	Phenol (ppm)		
0.00	Silver				
0.0	Zinc				

Results in mg/l unless otherwise noted.

100%, Recycled Paper

FOR LAB USE ONLY	
Transported by: <i>[Signature]</i>	Lab Number: 004182
Received by: <i>[Signature]</i>	Date sample rec'd: 5/15/79
Transported by: MAY 17 1979	Date analysis completed: 5-15-79
Received by: <i>[Signature]</i>	Date results forwarded: 5-16-79
	Total Tests requested: 28 Tests run: 28
	Lab Section: Chicago Supervisor: <i>[Signature]</i>

TRANSACTION CODE		NPDES		YR	MO	DA	TYPE	INSPECTOR	FAC TYPE	TIME	
N	5	110002640		79	04	11	5	5	2	10:00	2:30
1	2	3	11	12	17	18	19	20		a.m.	p.m.
REMARKS											
COMPLIANCE EVALUATION AND SAMPLING INSPECTION											
21											
64											
ADDITIONAL											
N											
65 70											
SECTION A - Permit Summary											
NAME AND ADDRESS OF FACILITY (Include County, State and ZIP code)										EXPIRATION DATE	
ALLIED CHEMICAL CORPORATION										8-01-79	
CALUMET WORKS										ISSUANCE DATE	
12260 SOUTH CARONDOLET AVENUE										8-24-77	
CHICAGO, ILLINOIS 60633											
RESPONSIBLE OFFICIAL						TITLE			PHONE		
CHRISTIAN T. NIELSEN						PLANT MANAGER			(312) 933-8810		
FACILITY REPRESENTATIVE						TITLE			PHONE		
DENNIS L. HATFIELD						SUPERVISOR OF ENVIRONMENTAL ENG'G.			(312) 933-8851		
SECTION B - Effluent Characteristics (Additional sheets attached _____) MARCH, 1979 D.M.R.											
PARAMETER/OUTFALL		MINIMUM	AVERAGE	MAXIMUM	ADDITIONAL						
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	DISCHARGE 001									
FLOW	SAMPLE MEASUREMENT	4.0	4.2	4.4							
MGD	PERMIT REQUIREMENT	-	-	-							
TEMPERATURE	SAMPLE MEASUREMENT	13	-	21	TEMPERATURE OF RECEIVING WATER SHALL NOT EXCEED 93°F 5% OF THE TIME, OR 100°F AT ANY TIME						
°C	PERMIT REQUIREMENT	-	-	-							
SUSPENDED SOLIDS	SAMPLE MEASUREMENT	7	8.8	10							
MG/L	PERMIT REQUIREMENT	-	-	-							
PH	SAMPLE MEASUREMENT	3.2	-	7.8	2 EXCURSIONS IN 8 ANALYSES REPORTED AND SATISFACTORILY EXPLAINED IN NON-COMPLIANCE REPORT.						
S.U.	PERMIT REQUIREMENT	6.0	-	9.0							
SECTION C - Facility Evaluation (S = Satisfactory, U = Unsatisfactory, N/A = Not applicable)											
S	EFFLUENT WITHIN PERMIT REQUIREMENTS	NA	OPERATION AND MAINTENANCE	S	SAMPLING PROCEDURES						
S	RECORDS AND REPORTS	NA	COMPLIANCE SCHEDULE	S	LABORATORY PRACTICES						
S	PERMIT VERIFICATION	S	FLOW MEASUREMENTS		OTHER:						
SECTION D - Comments											
SECTION E - Inspection/Review											
SIGNATURES		AGENCY	DATE	ENFORCEMENT DIVISION USE ONLY							
INSPECTED BY	Francisco C. Yumjy	IEPA	4-11-79								
INSPECTED BY											
REVIEWED BY	E. J. Marek	IEPA	5/25/79								

PARAMETER/ OUTFALL		MINIMUM	AVERAGE	MAXIMUM	ADDITIONAL
SULFATE	SAMPLE MEASUREMENT	62	95	118	
MG/L	PERMIT REQUIREMENT	-	-	-	
IRON (TOTAL)	SAMPLE MEASUREMENT	0.9	1.4	1.8	
MG/L	PERMIT REQUIREMENT	-	-	2.0	
	SAMPLE MEASUREMENT				
	PERMIT REQUIREMENT	<u>DISCHARGE 002</u>			
FLOW	SAMPLE MEASUREMENT	6.0	6.7	7.6	
MGD	PERMIT REQUIREMENT	-	-	-	
TEMPERATURE	SAMPLE MEASUREMENT	15	-	26	
°C	PERMIT REQUIREMENT	-	-	-	
SUSPENDED SOLIDS	SAMPLE MEASUREMENT	5	15	37	
MG/L	PERMIT REQUIREMENT	-	-	-	
PH	SAMPLE MEASUREMENT	7.8	-	7.9	
S.U.	PERMIT REQUIREMENT	6.0	-	9.0	
SULFATE	SAMPLE MEASUREMENT	38	65	94	
MG/L	PERMIT REQUIREMENT	-	-	-	
IRON (TOTAL)	SAMPLE MEASUREMENT	0.9	1.3	1.6	
MG/L	PERMIT REQUIREMENT	-	-	2.0	
	SAMPLE MEASUREMENT				
	PERMIT REQUIREMENT	<u>INTAKE</u>			
SUSPENDED SOLIDS	SAMPLE MEASUREMENT	3	7	8	
MG/L	PERMIT REQUIREMENT				
PH	SAMPLE MEASUREMENT	7.8	-	8.3	NOT REQUIRED BY PERMIT
S.U.	PERMIT REQUIREMENT	-	-	-	
SULFATE	SAMPLE MEASUREMENT	38	65	94	
MG/L	PERMIT REQUIREMENT				
	SAMPLE MEASUREMENT				
	PERMIT REQUIREMENT				
	SAMPLE MEASUREMENT				

Sections F thru L: Complete on all inspections, as appropriate. N/A = Not Applicable.		PERMIT NO. IL 0062640
SECTION F - Facility and Permit Background		
ADDRESS OF PERMITTEE IF DIFFERENT FROM FACILITY <i>(Including City, County and ZIP code)</i> <div style="text-align: center; font-size: 1.2em; font-weight: bold;">SAME</div>	DATE OF LAST PREVIOUS INVESTIGATION BY EPA/STATE <div style="text-align: center; font-size: 1.2em; font-weight: bold;">9-25-78</div>	
FINDINGS UNSATISFACTORY EFFLUENT (PH EXCURSIONS), FLOW MEASUREMENT AND SAMPLING PROCEDURES		
SECTION G - Records and Reports		
RECORDS AND REPORTS MAINTAINED AS REQUIRED BY PERMIT. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <i>(Further explanation attached _____)</i>		
DETAILS:		
(a) ADEQUATE RECORDS MAINTAINED OF:		
(i) SAMPLING DATE, TIME, EXACT LOCATION	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
(ii) ANALYSES DATES, TIMES	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
(iii) INDIVIDUAL PERFORMING ANALYSIS	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
(iv) ANALYTICAL METHODS/TECHNIQUES USED	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
(v) ANALYTICAL RESULTS <i>(e.g., consistent with self-monitoring report data)</i>	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
(b) MONITORING RECORDS <i>(e.g., flow, pH, D.O., etc.)</i> MAINTAINED FOR A MINIMUM OF THREE YEARS INCLUDING ALL ORIGINAL STRIP CHART RECORDINGS <i>(e.g., continuous monitoring instrumentation, calibration and maintenance records)</i> .		
	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
(c) LAB EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS KEPT. CALIBRATED ROUTINELY	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(d) FACILITY OPERATING RECORDS KEPT INCLUDING OPERATING LOGS FOR EACH TREATMENT UNIT.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(e) QUALITY ASSURANCE RECORDS KEPT.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
(f) RECORDS MAINTAINED OF MAJOR CONTRIBUTING INDUSTRIES <i>(and their compliance status)</i> USING PUBLICLY OWNED TREATMENT WORKS.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
SECTION H - Permit Verification		
INSPECTION OBSERVATIONS VERIFY THE PERMIT. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <i>(Further explanation attached _____)</i>		
DETAILS:		
(a) CORRECT NAME AND MAILING ADDRESS OF PERMITTEE.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
(b) FACILITY IS AS DESCRIBED IN PERMIT.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
(c) PRINCIPAL PRODUCT(S) AND PRODUCTION RATES CONFORM WITH THOSE SET FORTH IN PERMIT APPLICATION.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A
(d) TREATMENT PROCESSES ARE AS DESCRIBED IN PERMIT APPLICATION.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(e) NOTIFICATION GIVEN TO EPA/STATE OF NEW, DIFFERENT OR INCREASED DISCHARGES.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(f) ACCURATE RECORDS OF RAW WATER VOLUME MAINTAINED. INTAKE WATER / CALUMETR.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
(g) NUMBER AND LOCATION OF DISCHARGE POINTS ARE AS DESCRIBED IN PERMIT.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
(h) CORRECT NAME AND LOCATION OF RECEIVING WATERS.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
(i) ALL DISCHARGES ARE PERMITTED.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
SECTION I - Operation and Maintenance		
TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED. <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A <i>(Further explanation attached _____)</i>		
DETAILS: ALL DISCHARGES ARE NON-CONTACT COOLING WATER. NO TREATMENT.		
(a) STANDBY POWER OR OTHER EQUIVALENT PROVISIONS PROVIDED.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(b) ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES AVAILABLE.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(c) REPORTS ON ALTERNATE SOURCE OF POWER SENT TO EPA/STATE AS REQUIRED BY PERMIT.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(d) SLUDGES AND SOLIDS ADEQUATELY DISPOSED.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(e) ALL TREATMENT UNITS IN SERVICE.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(f) CONSULTING ENGINEER RETAINED OR AVAILABLE FOR CONSULTATION ON OPERATION AND MAINTENANCE PROBLEMS.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(g) QUALIFIED OPERATING STAFF PROVIDED. FOR LABORATORY	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
(h) ESTABLISHED PROCEDURES AVAILABLE FOR TRAINING NEW OPERATORS.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(i) FILES MAINTAINED ON SPARE PARTS INVENTORY, MAJOR EQUIPMENT SPECIFICATIONS, AND PARTS AND EQUIPMENT SUPPLIERS.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(j) INSTRUCTIONS FILES KEPT FOR OPERATION AND MAINTENANCE OF EACH ITEM OF MAJOR EQUIPMENT.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(k) OPERATION AND MAINTENANCE MANUAL MAINTAINED.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(l) SPCC PLAN AVAILABLE.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(m) REGULATORY AGENCY NOTIFIED OF BY PASSING. <i>(Dates _____)</i>	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(n) ANY BY-PASSING SINCE LAST INSPECTION.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(o) ANY HYDRAULIC AND/OR ORGANIC OVERLOADS EXPERIENCED.	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A

SECTION J - Compliance Schedules

PERMITTEE IS MEETING COMPLIANCE SCHEDULE.

☐ YES ☐ NO ☒ N/A (Further explanation attached _____)

CHECK APPROPRIATE PHASE(S):

- ☐ (a) THE PERMITTEE HAS OBTAINED THE NECESSARY APPROVALS FROM THE APPROPRIATE AUTHORITIES TO BEGIN CONSTRUCTION.
- ☐ (b) PROPER ARRANGEMENT HAS BEEN MADE FOR FINANCING (mortgage commitments, grants, etc.).
- ☐ (c) CONTRACTS FOR ENGINEERING SERVICES HAVE BEEN EXECUTED.
- ☐ (d) DESIGN PLANS AND SPECIFICATIONS HAVE BEEN COMPLETED.
- ☐ (e) CONSTRUCTION HAS COMMENCED.
- ☐ (f) CONSTRUCTION AND/OR EQUIPMENT ACQUISITION IS ON SCHEDULE.
- ☐ (g) CONSTRUCTION HAS BEEN COMPLETED.
- ☐ (h) START UP HAS COMMENCED.
- ☐ (i) THE PERMITTEE HAS REQUESTED AN EXTENSION OF TIME.

SECTION K - Self-Monitoring Program

Part 1 - Flow measurement (Further explanation attached _____)

PERMITTEE FLOW MEASUREMENT MEETS THE REQUIREMENTS AND INTENT OF THE PERMIT.

☒ YES ☐ NO ☐ N/ADETAILS: DYE TRACER METHOD (ACCURACY TO BE CHECKED BY DILUTION METHOD)

- (a) PRIMARY MEASURING DEVICE PROPERLY INSTALLED. ☐ YES ☐ NO ☒ N/A
- TYPE OF DEVICE: ☐ WEIR ☐ PARSHALL FLUME ☐ MAGMETER ☐ VENTURI METER ☐ OTHER (Specify _____)
- (b) CALIBRATION FREQUENCY ADEQUATE. (Date of last calibration WILL CHECK ACCURACY) ☐ YES ☒ NO ☐ N/A
- (c) PRIMARY FLOW MEASURING DEVICE PROPERLY OPERATED AND MAINTAINED. ☐ YES ☐ NO ☒ N/A
- (d) SECONDARY INSTRUMENTS (totalizers, recorders, etc.) PROPERLY OPERATED AND MAINTAINED. ☐ YES ☐ NO ☒ N/A
- (e) FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGES OF FLOW RATES. ☒ YES ☐ NO ☐ N/A

Part 2 - Sampling (Further explanation attached _____)

PERMITTEE SAMPLING MEETS THE REQUIREMENTS AND INTENT OF THE PERMIT.

☒ YES ☐ NO ☐ N/A

DETAILS:

- (a) LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES. ☒ YES ☐ NO ☐ N/A
- (b) PARAMETERS AND SAMPLING FREQUENCY AGREE WITH PERMIT. ☒ YES ☐ NO ☐ N/A
- (c) PERMITTEE IS USING METHOD OF SAMPLE COLLECTION REQUIRED BY PERMIT.
IF NO, ☐ GRAB ☐ MANUAL COMPOSITE ☐ AUTOMATIC COMPOSITE FREQUENCY 3 TIMES / 24 HRS.
- (d) SAMPLE COLLECTION PROCEDURES ARE ADEQUATE. ☒ YES ☐ NO ☐ N/A
- (i) SAMPLES REFRIGERATED DURING COMPOSITING ☒ YES ☐ NO ☐ N/A
- (ii) PROPER PRESERVATION TECHNIQUES USED ☒ YES ☐ NO ☐ N/A
- (iii) FLOW PROPORTIONED SAMPLES OBTAINED WHERE REQUIRED BY PERMIT ☐ YES ☐ NO ☒ N/A
- (iv) SAMPLE HOLDING TIMES PRIOR TO ANALYSES IN CONFORMANCE WITH 40 CFR 136.3 ☒ YES ☐ NO ☐ N/A
- (e) MONITORING AND ANALYSES BEING PERFORMED MORE FREQUENTLY THAN REQUIRED BY PERMIT. ☒ YES ☐ NO ☐ N/A
- (f) IF (e) IS YES, RESULTS ARE REPORTED IN PERMITTEE'S SELF-MONITORING REPORT. ☒ YES ☐ NO ☐ N/A

Part 3 - Laboratory (Further explanation attached _____)

PERMITTEE LABORATORY PROCEDURES MEET THE REQUIREMENTS AND INTENT OF THE PERMIT.

☒ YES ☐ NO ☐ N/A

DETAILS:

- (a) EPA APPROVED ANALYTICAL TESTING PROCEDURES USED. (40 CFR 136.3) ☒ YES ☐ NO ☐ N/A
- (b) IF ALTERNATE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED. ☐ YES ☐ NO ☒ N/A
- (c) PARAMETERS OTHER THAN THOSE REQUIRED BY THE PERMIT ARE ANALYZED. INTAKE pH ☒ YES ☐ NO ☐ N/A
- (d) SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT. ☒ YES ☐ NO ☐ N/A
- (e) QUALITY CONTROL PROCEDURES USED. ☐ YES ☐ NO ☐ N/A
- (f) DUPLICATE SAMPLES ARE ANALYZED. 75 % OF TIME. ☒ YES ☐ NO ☐ N/A
- (g) SPIKED SAMPLES ARE USED. _____ % OF TIME. ☐ YES ☒ NO ☐ N/A
- (h) COMMERCIAL LABORATORY USED. ☐ YES ☒ NO ☐ N/A
- (i) COMMERCIAL LABORATORY STATE CERTIFIED. ☐ YES ☐ NO ☒ N/A

LAB NAME _____

LAB ADDRESS _____

SECTION L - Effluent/Receiving Water Observations (Further explanation attached _____)

OUTFALL NO.	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	VISIBLE FLOAT SOL	COLOR	OTHER
001	NONE	NONE	CLEAR	NONE	NONE	COLORLESS	-
002	NONE	NONE	CLEAR	NONE	NONE	COLORLESS	-

(Sections M and N: Complete as appropriate for sampling inspections)

SECTION M - Sampling Inspection Procedures and Observations (Further explanation attached _____)

- ☒ GRAB SAMPLES OBTAINED
☒ COMPOSITE OBTAINED
☐ FLOW PROPORTIONED SAMPLE
☐ AUTOMATIC SAMPLER USED
☒ SAMPLE SPLIT WITH PERMITTEE
☒ CHAIN OF CUSTODY EMPLOYED
☐ SAMPLE OBTAINED FROM FACILITY SAMPLING DEVICE

COMPOSITING FREQUENCY 3 TIMES / 24 HRS. PRESERVATION ACIDSSAMPLE REFRIGERATED DURING COMPOSITING: ☒ YES ☐ NOSAMPLE REPRESENTATIVE OF VOLUME AND NATURE OF DISCHARGE YES

SECTION N - Analytical Results (Attach report if necessary)

SEE ATTACHED REPORT

CC - DWPC-FOS-RU
- DWPC-Permits
- Lee Townsend, USEPA
- Arnold Leder, USEPA

COMPLIANCE EVALUATION INSPECTION

ALLIED CHEMICAL CORPORATION
CHICAGO, ILLINOIS

IL 0002640

DATE:

April 11, 1979

PERSONS INTERVIEWED:

C. T. Nielsen, Plant Manager
D. L. Hatfield, Supervisor
of Environmental Engineering
J. L. Harris, Technical
Supervisor

On the above date, a compliance evaluation inspection was conducted at the subject facility located at 12260 South Carondelet Avenue, Chicago Illinois.

The following summary of information relates to the compliance evaluation relative to NPDES permit requirements.

Facility Description

The Calumet works of the Industrial Chemicals Division, Allied Chemical Corporation currently manufacture sulfuric acid, ammonium thiosulfate, aluminum chloride solution, and reduced chromium sulfate (Koreon). The plant also used to manufacture chemically pure (CP) acids, but dropped this product last year.

The plant property comprises an area of about 90 acres lying on the east side of the Calumet River and on both sides of Wolf Creek.

Feed stock of the sulfuric acid plant is a combination of sulfur and spent alkylation acid. The latter is recycled from local oil refineries. The sulfur is derived from desulfurization of sour crudes at local refineries.

Process wastes, comprising primarily maintenance related materials and plant area wash downs, are pumped to a pretreatment system. This mixture of various process wastes is chemically treated to neutralize and precipitate the iron. After the chemical addition this wastewater is settled in a large asphalt lined holding basin. Supernatant is then pumped to the Metropolitan Sanitary District of Greater Chicago, along with the plant's sanitary sewage. Sludge settled out in the pretreatment plant is disposed of by truck to authorized landfills.

Potable water for sanitary and process purposes is obtained from the City of Chicago.

COMPLIANCE EVALUATION INSPECTION

APRIL 11, 1979

PAGE 2

The plant's NPDES permit No. #IL 0002640 authorizes discharge of non-contact cooling waters uncontaminated by process wastes. Intake water is drawn from the Calumet River by the plant intake and provides the non-contact cooling water to the plant's once-through cooling system. The cooling system comprises numerous heat exchangers of the cascade and the shell and tube types. The tubes of the shell and tube type are made of inconel metal or stainless steel, both highly resistant to acid. The tubes of the cascade type are made of cast iron or lead. The plant is experiencing leakage problems with the latter type, which is outmoded. The acid leaks result in pH excursions, which the facility has been reporting every month since November, 1977 and almost monthly prior to that month. The plant has a program of replacing the cascade type heat exchangers with the tube and shell type, which is expected to be completed within six months. The plant manager hopes to reduce pH excursions to yearly occurrences instead of monthly with the full conversion to shell and tube heat exchangers.

Laboratory Procedures

All analyses required by the NPDES permit are performed by technicians under the laboratory supervisor, Mir Norman Khan. Appropriate sample preservation are used and all analyses are completed by the day following the sample collection. Dissolved iron samples are digested prior to atomic absorption analysis. Calibration of laboratory equipment are adequately done, including the sulfate method which was just recently calibrated.

Site Inspection and Sampling

Non-contact cooling waters uncontaminated by process wastes are discharged through outfalls #001 and #002 into the Calumet River. Intake water is drawn from the Calumet River via the plant's intake.

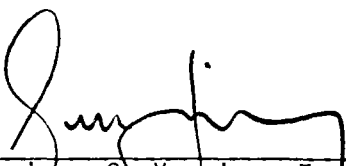
The location of the sampling points are as follows:

- | | |
|----------------------|---|
| <u>Intake:</u> | Manhole just a few feet west of the steel sheet piling along the river's east bank. The intake line is a 30 inch diameter steel pipe. |
| <u>Outfall #001:</u> | Manhole south of the intake line, a few feet east of the sheet piling along the river's east bank. The discharge line is a 20 inch diameter pipe. |
| <u>Outfall #002:</u> | Manhole north of the intake line, also located a few feet east of the river's east bank. |

COMPLIANCE EVALUATION INSPECTION
APRIL 11, 1979
PAGE 3

24-hour composite samples were prepared by the plant's personnel for Outfalls #001 and #002 and were split with the permittee. Grab samples were obtained for the intake, as well as at Outfalls #001 and #002 (for oil and grease) and were also split with the permittee. The composite samples are composed of three grab samples taken at different times during the last 24 hours.

The attached table shows the Chicago Laboratory analyses of all samples split with the permittee.



Francisco C. Yumping, Environmental
Protection Engineer, Maywood

FCY:gkw

TABLE OF LABORATORY TEST RESULTS: Calumet Works,
Industrial Chemicals Division, Allied
Chemical Corporation

PARAMETER	INTAKE WATER LAB #3933	OUTFALL #001 LAB #3934	OUTFALL #002 LAB #3935
Field Temperature (°C)	10	15	20
pH (Std. Units)	8.4	8.3	8.4
Phosphorus	0.05	0.06	0.05
COD	20	24	20
Ammonia Nitrogen	2.0	1.8	1.8
Nitrate + Nitrite as N	1.4	1.3	1.3
T.D.S./E.C.	494	424	439
Suspended Solids	2	6	2
Arsenic	0.000	0.012	0.000
Boron	0.2	0.2	0.2
Cyanide	0.01	0.01	0.01
Iron (Total)	0.5	0.7	0.7
Lead	0.01	0.01	0.02
Manganese	0.09	0.09	0.09
Mercury (Micro GM/L)	0.0	0.1	0.0
Flouride	0.8	0.8	0.8
Chloride	110	110	110
Sulfate	91	98	94
Oil & Grease	0	0	0
Residue on Evaporation	----	488	482
Potassium	19.2	18	18.8
Sodium	----	80	80
Phenol	0.000	0.011	0.005

- NOTES: 1. All units are in MG/L, except as noted otherwise.
2. All other trace metals are reported to be below detectable levels.
3. Results for intake water (all parameters) and outfalls #001 and #002 (Oil and Grease) are based on grab samples.
4. Results for Outfalls #001 and #002 (all parameters except Oil & Grease) are based on 24-hour composite samples.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY--DIVISION OF WATER POLLUTION CONTROL

SPECIAL ANALYSIS FORM

03933 APR 11

Time Collected 12:00 N.Sub-Basin MAYWOODDate Collected 4-11-79Collector F. C. YUMPINGFacility Name: ALLIED CHEMICAL CO. Facility Number:

File Town

Stream Name(s): CHICAGO - COOK

Stream Code:

Source of Sample: (Exact Location)

INTAKE WATER - CALUMET RIVERRECEIVED
ILL. ENVIRONMENTAL PROTECTION AGENCY
MAY - 7 1979

Physical Observations, Remarks:

COMPOSITE SAMPLES EXCEPT FOR OILDIVISION OF WATER POLLUTION CONTROL
FIELD OPERATIONS SECTION - REG. 2

Field Dissolved Oxygen

Field pH

Field Temp. 10°C0.000 Arsenic

Coliform/100ml

BOD

0.0 Barium

Fecal Coliform

20 COD0.2 Boron

Fecal Strep

2.3-4 TS/EC0.00 Cadmium

Algae (Total) /ml

9 Susp. Solids0.00 Copper2.0 Ammonia (N)

Vol. Susp. Solids

0.00 Chromium (tri)

Organic Nitrogen (N)

8.4 pH (units)0.00 Chromium (hex)1.4 Nitrate + Nitrite (N)

Turbidity (JTU)

0.5 Iron (Total)0.05 Phosphorus (P)

Hardness

Iron (Dissolved)

110 Chloride

Alkalinity

0.01 Lead0.8 Fluoride

Total Acidity

0.09 Manganese91 Sulfate

Free Acidity

0.0 Mercury (ppb)0.01 Cyanide0 Oil0.0 Nickel

MBAS

19.2 Other (Specify) K0.00 Selenium0.000 Phenol (ppm)0.06 SilverTransported by: [Signature]Lab Number 03933 Rec'd by [Signature]0.0 Zinc

Received by:

Date sample rec'd: 4-11-79 Time: 4:38 PM

Transported by:

Date analysis completed: 5-2-79

Received by:

Date results forwarded: 5-3-79Total Tests requested: 29 Tests run: 29Lab Section Chicago Supervisor: [Signature]

Results in mg/l unless otherwise noted.

03934 APR 11

WATER QUALITY AND WASTE TREATMENT WORKS EFFLUENT SAMPLING FORM

SAMPLE COLLECTED BY F.C. YUMPING		LOCATION OF SAMPLING POINT ALLIED CHEMICAL CO. CADANOLET, CHICAGO		IL 0002640-001	
DES PLAINES ADDED		SUB-BASIN (IF NONE ENTER "DIRECT") GRAND CALUMET R		TRIBUTARY CALUMET R.	
MINOR TRIBUTARY		PERFORMANCE MEASUREMENT SECTION, SPRINGFIELD		SEND COPY OF EDP SERVICES RESULTS TO <input checked="" type="checkbox"/> SECTION, SPRINGFIELD	
CARD COL. 1 HAA		CARD COL. 2 01		CARD COL. 3 031	
CARD NO. 1 C003934		CARD NO. 2 C003934		CARD NO. 3 C003934	
BASIN CODE E		SAMPLE TYPE CODE E		SAMPLE TYPE CODE E	
YEAR 79		MONTH 04		DAY 11	
HOUR (NEAREST) 12		TIME OF DAY (A,P,N) N		WATER TEMPERATURE (DEG. F.) 15°C	
FIELD D.O. 8.3		FECAL COL. (NO./100ML) 0.06		FECAL COL. (NO./100ML) 0.01	
ARSENIC 0.012		BARIUM 0.0		BORON 0.2	
CADMIUM 0.00		CHROMIUM (HEX) 0.00		CHROMIUM (TRI) 0.00	
CHROMIUM (TOTAL) 0.00		COPPER 0.00		CYANIDE 0.01	
IRON (TOTAL) 0.7		IRON (DISSOLVED) 0.1		LEAD 0.01	
MANGANESE 0.09		MERCURY (MICROGM/L) 0.1		NICKEL 0.00	
SELENIUM 0.00		SILVER 0.00		ZINC 0.00	
PLANKTON (NO./ML) 0.8		FLUORIDE 1.10		CHLORIDE 9.8	
SULFATE AS SO 0		TOTAL SULFUR AS S 0		OIL 0	
M.B.A.S. 43.49		CARBON CHLOROFORM EXTRACT 47.50		TURBIDITY (UNITS) 4.88	
RESIDUE ON EVAPORATION 55.58		VOLATILE SUSP. SOLIDS 59.62		COLOR (UNITS) 63.65	
HARDNESS 66.68		ALKALINITY 69.71		TOTAL ACIDITY 72.74	
FREE ACIDITY 75.77		OTHER TESTS REQUIRED NA		RESULTS 80	
RESULTS 18.0		RESULTS 18.0		RESULTS 18.0	

ALL RESULTS EXPRESSED AS MG/L EXCEPT WHERE OTHERWISE STATED.

PHYSICAL OBSERVATIONS & COMMENTS (ABNORMAL COLOR, ODOR, FLOATING MATTER, OIL, SLUDGE, TURBIDITY, WEATHER, LOCATION OF SAMPLING POINT):

COMPOSITE SAMPLES EXCEPT FOR OIL WHICH IS GRAB

RECEIVED BY **PROTECTION AGENCY**

SIGN BELOW FOR EFFLUENT SAMPLE		FOR LABORATORY USE ONLY	
TRANSPORTED BY [Signature]		DATE RECEIVED BY [Signature]	
DATE RECEIVED BY 4-11-79		TIME RECEIVED 4:30 P.M.	
DATE ANALYSES COMPLETED 5-2-79		DATE RESULTS FORWARDED 5-3-79	
TOTAL TESTS REQUESTED 31		TESTS RUN 31	
LAB SECTION Chicago		SUPERVISOR [Signature]	

WATER QUALITY AND WASTE TREATMENT WORKS EFFLUENT SAMPLING FORM

SAMPLE COLLECTED BY F.C. YUMPING		LOCATION OF SAMPLING POINT ALLIED CHEMICAL CO. CARANOLET, CHICAGO		IL 0002640-002	
SUB-BASIN (IF NONE ENTER "DIRECT") GRAND CALUMET R.		TRIBUTARY CALUMET R.		MINOR TRIBUTARY	
SIGNAL RESULTS TO MAYWOOD		SUB-BASIN OFFICE <input type="checkbox"/> PERFORMANCE MEASUREMENT SECTION, SPRINGFIELD		SEND COPY OF RESULTS TO <input checked="" type="checkbox"/> FOP SERVICE'S SECTION, SPRINGFIELD	
CARD COL. 1	CARD NO. 1	CARD COL. 2	CARD NO. 2	CARD COL. 3	CARD NO. 3
H A A	BASIN CODE	02	PLANT OR STATION NO.	031	FIPS COUNTY CODE (USE ONLY FOR PLANTS)
C003935	LAB ID NO.	C003935	LAB ID NO.	C003935	LAB ID NO.
18 E SAMPLE TYPE CODE (SEE LIST BELOW)		18 E SAMPLE TYPE CODE		18 E SAMPLE TYPE CODE	
79 YEAR		ARSENIC 0.000		PLANKTON (NO./ML) 0.8	
04 MONTH		BARIUM 0.0		FLUORIDE 0.8	
11 DAY		BORON 0.2		CHLORIDE 110	
12 HOUR IN AREST		CADMIUM 0.00		SULFATE AS SO4 9.4	
N TIME OF DAY (A,P,N)		CHROMIUM (HEX) 0.60		TOTAL SULFUR AS S 0	
20°C WATER TEMPERATURE (DEG. F.)		CHROMIUM (TRI) 0.00		OIL 0	
FIELD D.O. 8.4		CHROMIUM (TOTAL) 0.60		M.B.A.S. 43-46	
34-36		COPPER 0.00		CARBON CHLOROFORM EXTRACT 47-50	
0.05		CYANIDE 0.01		TURBIDITY (UNITS) 51-54	
37-40		IRON (TOTAL) 0.7		RESIDUE ON EVAPORATION 48.2	
20		IRON DISSOLVED 0.02		VOLATILE SUSP. SOLIDS 59-62	
0.005		LEAD 0.00		COLOR (UNITS) 63-65	
1.8		MANGANESE 0.09		HARDNESS 66-68	
1.3		MERCURY (MICROGM/L) 0.0		ALKALINITY 69-71	
1.3		NICKEL 0.0		TOTAL ACIDITY 72-74	
1.3		SELENIUM 0.00		FREE ACIDITY 75-77	
1.3		SILVER 0.00		OTHER TESTS REQUIRED RESULTS	
1.3		ZINC 0.0		NA 80	
1.3		ALL RESULTS EXPRESSED AS MG/L EXCEPT WHERE OTHERWISE STATED.		K 18.8	
1.3		PHYSICAL OBSERVATIONS & COMMENTS (ABNORMAL COLOR, ODOR, FLOATING MATTER, OIL, SLUDGE, TURBIDITY, WEATHER, LOCATION OF SAMPLING POINT)			
1.3		COMPOSITE SAMPLES EXCEPT FOR OIL			
1.3		RECEIVED			
1.3		EPA REGION 5			

1. DOMESTIC WASTE ONLY
2. INDUSTRIAL WASTE ONLY
3. MIXED DOMESTIC & INDUSTRIAL WASTE
4. SEWAGE LAKE OR RECEIVING WATER QUALITY
5. OTHER (CHARGE) OR WASTE
6. OTHER OR TYPE UNKNOWN

SIGN BELOW FOR EFFLUENT SAMPLE

TRANSPORTED BY

RECEIVED BY

TRANSPORTED BY

MAY

EPA REGION 5

FOR LABORATORY USE ONLY

751079

RECEIVED BY

DATE RECEIVED

DATE ANALYSIS COMPLETED

DATE RESULTS FORWARDED

TOTAL TESTS REQUIRED

LAB SECTION

TIME REC'D

TESTS RUN

SUPERVISOR